

Application No.: 10/811,991Docket No.: 713-584AREMARKS

Applicants appreciate the Examiner's thorough review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Claims 1-3 and 8-22 are pending in the instant application. Claims 1-3 and 8-14 remain unchanged notwithstanding the Examiner's new/modified rejections. New claims 15-22 have been added to provide Applicants with the scope of protection to which they are believed entitled. The new claims find solid support in the original application, e.g., page 4, lines 17-18; page 15, line 7; and original claims 4-7. No new matter has been introduced through the foregoing amendments:

The Examiner's modified rejection of claims 1-2 and 12-13 as being anticipated by *Yasui* (Japanese Patent JP-04363163A) is noted. Applicants respectfully traverse this rejection for the reasons which were advanced in the Amendment filed November 9, 2004, at pages 5-6, and are incorporated herein by reference. In particular, Applicants respectfully submit that *Yasui* fails to teach or disclose the claimed steps of:

- (1) providing a paste applying machine for discharging a **molten paste** of thermoplastic material, and
- (2) spreading the molten paste **by means of centrifugal force** acting on the cylinder being rotated, to thereby wholly cover said region with said molten paste.

With respect to limitation (1), the Examiner alleged at the boom of page 2 of the Office Action that the *Yasui* disclosed "thermally sprayed" defines that the material will be heated and **melted** which indicates that the material will achieve molten paste form. Applicants respectfully traverse the Examiner's allegation.

It is acknowledged that "thermally" has a dictionary meaning of "involving heat," and Applicants agree with the Examiner's that the *Yasui* material being thermally sprayed is heated. However, Applicants do not agree with the Examiner that the *Yasui* material is also melted. The Examiner appeared to argue that if a thermoplastic is heated, it is also melted. This is not a valid argument. The Examiner's argument is equivalent to "if water is heated, it is boiled" or "if water is

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cooled, it is frozen." However, it is common knowledge that water is not necessarily boiled (frozen) if it is heated (cooled) only to a temperature below (above) the water boiling (freezing) point. Similarly, a person of ordinary skill in the art would recognize that the *Yasui* material which is thermally sprayed is not necessarily melted, contrary to the Examiner's allegation. *Yasui* clearly fails to teach or disclose the claimed molten state.

In contrast, the reference explicitly teaches the opposite, i.e., the material being thermally sprayed is not in molten state. *Yasui* in the English Abstract, line 3 from bottom, specifically teaches that the material being thermally sprayed is in **powder** form. A person of ordinary skill in the art would at once recognize that the material being thermally sprayed in *Yasui* is heated, but remains its solid (powdered) state, and, therefore, cannot be considered to be in molten state as presently claimed.

The Examiner is encouraged to obtain an independent, accurate, English translation of the *Yasui* reference to verify the Applicants' understanding of the technology disclosed in *Yasui*.

With respect to (2), the Examiner alleged on page 3 lines 5 of the Office Action that *Yasui*'s structures 9 of FIG. 1 or 15, 15a of FIG. 3 are **described in the specification** as rotary elements. The Examiner is kindly asked to specify the paragraph and/or column and/or line numbers of the *Yasui* specification, where the alleged teachings might be found. If the *Yasui* specification portion relied upon by the Examiner is not in English, the Examiner is kindly asked to provide an English translation thereof so that Applicants can verify the Examiner's reading of the reference, and properly understand and respond to the Examiner's rejection.

Accordingly, Applicants respectfully submit that the 35 U.S.C. 102(b) rejection of claims 1-2 and 12-13 as formulated by the Examiner is improper and should be withdrawn or at least rephrased.

The Examiner's alternative 35 U.S.C. 103(a) rejection of claims 1-2 and 12-13 as being obvious over *Yasui* in view of either *Feder* (U.S. Patent No. 4,490,411) or *Potoczky* (U.S. Patent No. 4,687,531) is noted. Applicants respectfully traverse this rejection for the following reasons.

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The Examiner alleged that both *Feder* and *Potoczky* teach thermal spraying of a molten material onto the interior substrate. Applicants respectfully disagree.

Feder specifically teaches that the material to be sprayed includes metalizing particles. See, e.g., Abstract at line 7 and column 6, line 55 of *Feder*. The fact that particles are then converted to a semi-molten state on the inner surface of the cylinder by heat from coil 34 (e.g., column 6, line 58 of *Feder*) is irrelevant because the metalizing material achieves the semi-molten state *after* being sprayed. The correct reading of *Feder* is that the particles are discharged in **particulate** state. In this aspect, *Feder* does not meet the claimed molten state.

Similarly, *Potoczky* specifically teaches that the material to be deposited on the interior cavity of the mold surface is **powdered** thermoplastic material. See column 6, lines 40-42 of *Potoczky*. The fact that the material is then converted to a plastic state on the mold surface is irrelevant because the material achieves the plastic state *after* being deposited. The correct reading of *Potoczky* is that the particles are discharged in **powdered** state. In this aspect, *Potoczky* does not meet the claimed molten state.

It should be now clear that none of the applied references teach or suggest the claimed molten state of the thermoplastic being discharged. All the applied references teach depositing thermoplastic material in powdered or particulate form. For this reasons alone, the 35 U.S.C. 103(a) rejection of claims 1-2 and 12-13 is inappropriate and should be withdrawn. Applicants will nevertheless proceed with their remarks.

The Examiner further argued that it would be obvious to a person of ordinary skill in the art to have utilized rotation and centrifugal forces to spread the material effectively and uniformly. Applicants respectfully disagree with the Examiner's argument, because *Yasui* teaches away from the proposed combination, as argued in the last Amendment, at page 7, the second full paragraph.

In particular, because *Yasui* describes the use of an adhesive resin primer ("synthetic resin primer having adhesiveness") prior to application of the thermoplastic resin powder (English Abstract, line 4 from bottom), *Yasui* teaches away from any use of centrifugal force to spread molten material, if any, as the adhesive would tend to restrict spreading of such molten

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material. Based on *Yasui*'s use of an adhesive in this manner, it is apparent that *Yasui* is directed at preventing the spread of molten material. In contrast, the claimed subject matter of claim 1 spreads the molten paste.

Accordingly, Applicants respectfully submit that a prima facie case of obviousness has not been established, because (1) the references are not properly combinable in the manner the Examiner proposed (*Yasui* teaches away from the combination) and (2) the references in combination clearly fails to teach or disclose the claimed molten state (all references teach powdered or particulate form). The 35 U.S.C. 103(a) rejection of claims 1-2 and 12-13 should therefore be withdrawn.

The rejection of claims 3, 8-11 and 14 is traversed for the reasons advanced above with respect to claim 1 from which claims 3, 8-11 and 14 depend. The rejection is further traversed for the reason advanced in the last Amendment, i.e., the art has failed to recognize any of the claimed parameters as a result-effective variable. The Examiner is kindly reminded that the arguable fact that the general conditions of the rejected claims are disclosed in the prior art is only one prong of the two-prong routine optimization test, the other prong being the art-recognized result-effective variable which is missing from the Examiner's argument. See MPEP section 2144.05.II.B.

New independent claim 15 is patentable over the applied references because the references fail to disclose, teach or suggest, at least, the claimed step of "discharging a molten paste of said thermoplastic material, which is kept molten by heating, from a distal end of a nozzle" as argued above with respect to claim 1. Claims 16-18 depend from claim 15, and are considered patentable at least for the reason advanced with respect to claim 15.

New independent claim 19, is patentable over the applied references because the references fail to disclose, teach or suggest, at least, the claimed step of "discharging a molten paste of said thermoplastic material, which is kept molten by heating, from a distal end of a nozzle" as argued above with respect to claim 1. Claims 20-22 depend from claim 19, and are considered patentable at least for the reason advanced with respect to claim 19.

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Claims 19-22 are also believed patentable over the art, because the claims include the limitations of original claims 4-7, i.e., claims 1-4, respectively, of the parent, now U.S. Patent No. 6,790,284.

Accordingly, Applicants respectfully submit that all claims are now in condition for allowance. Early and favorable indication of allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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